

# EXHIBIT 6

# **NEWTON'S TELECOM DICTIONARY**

**23<sup>rd</sup>**  
**Edition**

**Harry Newton**



**New York**

## NEWTON's TELECOM DICTIONARY

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I promise you I won't give your name to anybody. Nobody. Promise.

*Harry Newton*



**chargen • Chief Information Officer**

**Charge Coupled Device or IT CCD.** CCDs are used as image sensors in an array of elements in which charges are produced by light focused on a surface. They consist of a rectangular array of hundreds of thousands of light-sensitive photo diodes. Light from a lens is focused onto the photo diodes. This frees up electrons (charges) which accumulate in the photo diodes. The charges are periodically released into vertical shift registers which move them along by charge-transfer to be amplified.

**chargen** Character Generation. Via TCP, a service that sends a continual stream of characters until stopped by the client. Via UDP, the server sends a random number of characters each time the client sends a datagram.

**Charlie-Foxtrot** Slang. Seriously beyond all hope. Very badly broken.

**chat** A common name for a type of messaging done over a network, involving short messages sent from one node to another. Chatting usually happens in real-time, sometimes in just short messages, replied to quickly. Sometimes, chatting software is RAM-resident, meaning it can be "popped up" inside an application program. Users are usually notified of an incoming chat by a beep and a message at the bottom of their screens.

**chat room** Real-time chat services offered by many Internet Information Service Providers such as America Online. Supporting a dozen or so participants, they act much like a teleconference, although on a text basis. Private rooms are those that can be entered by invitation. Public rooms allow anyone to participate.

**chatty** Describes an application or network protocol that makes abundant use of handshaking, request/response transactions, and/or acknowledgements. "Chattiness" increases latency and degrades performance on the network, in part because of the resources that are consumed by this chattiness, and in part due to the round trip time (RTT) associated with each request/response transaction.

**chattiness** Overhead caused by a network protocol's abundant use of handshaking, request/response transactions, and/or acknowledgements.

**cheapernet** A slang name for the thin wire coaxial cable (0.2-inch, RG58A/U 50-ohm) that uses a smaller diameter coaxial cable than standard thick Ethernet. Thin Ethernet is also called "Cheapernet" due to the lower cabling cost. Thin Ethernet systems tend to have transceivers on the network interface card, rather than in external boxes. PCs connect to the Thin Ethernet bus via a coaxial "T" connector. Thin Ethernet is now the most common Ethernet coaxial cable, though twisted pair is gaining. Thin Ethernet is also referred to as ThinNet or ThinWire. See also 10BASE-T.

**cheat codes** In the Spring of 2002 two Vermont teenagers were caught for killing two Dartmouth College professors. The teenagers believed that the entire world was like a giant computer game and there were "cheat codes" that could allow you to take a shortcut to success. Cheat codes are often used in computer games to lessen the time needed to learn the game and speed up your chances of winning. Such cheat codes are often found on Web sites.

**check bit** A bit added to a unit of data, say a byte or a word, and used for performing an accuracy check. See also Parity.

**check characters** Characters added to the end of a block of data which is determined by an algorithm using the data bits which are sent. The receiving device computes its own check characters. It compares them with those sent by the transmitter. If they do not match, the receiver requests the sender to send the block again. If the check characters match, then all the bits used to compute the check characters have been received properly.

**check switch** A procedural term used in DISH network receivers to establish a good signal connection between the receiver and the multi-sat dish switch. Running a check switch procedure will start a series of test. At the end of the test you will see a display of what satellites you can receive.

**check-in mailbox** The Centigram VoiceMemo II mailbox used to assign names and passcodes for guests checking into a hotel.

**check-out mailbox** The Centigram VoiceMemo II mailbox used to clear out guest mailboxes when the guest checks out of the hotel.

**checkpoint cycle** HDLC error recovery cycle formed by pairing an F bit with a previous P bit or vice versa.

**checkpoint restart** A managed file transfer option which, when enabled, involves sending special data packets along with the file being transferred, which inform the receiver where the file pointer is in the source file. The receiver commits the latest data received to the file system and records the sender's checkpoint and the position of the file pointer in the destination file. If a link connecting the sending and receiving machines goes down during a transfer or the transfer is not able to complete successfully for another reason, the file transfer automatically restarts at the last completed checkpoint, thereby not requiring the file transfer to restart from the beginning. When transferring very large files, checkpoint restart can save a lot of time and network bandwidth. See also managed file transfer.

**checkpointing** HDLC error recovery based on pairing of P and F bits and giving the equivalent of a negative acknowledgment without using either REJ or SREJ.

**checksum** The sum of a group of data items used for error checking. Checksum is computed by the sending computer based upon an algorithm that counts the bits going out in a packet. The check digit is then sent to the other end as the tail, or trailer of the packet. As the packet is being received, the receiving computer goes through the same algorithm, and if the check digit it comes up with is the same as the one received, all is well. Otherwise, it requests the packet be sent again.

**cheese** The content of a commercial site that mainly consists of pictures of the products or other equally useless information.

**cheese box** This is an old trick used by the boiler room operators to hide their real physical location from the vice squad. It was a call forwarding device placed in an empty room. Police would attempt to trace the location of a boiler room raid the spot where they thought the calls were being terminated at and find nothing but this device. Meanwhile a lookout for the operation would be watching and have his people shut down to avoid detection as the police got one step closer. The name for this device originated because the first time the police came across this piece of hardware it was fitted into a box originally containing cheese. See Boiler Room.

**cheesing** When a buffered fiber cable appears to stretch during stripping and then cheeses (creeps) back into the outer jacket of the cable, to resume its original place.

**chemical rectifier** A chemical device for changing alternating current to pulsating direct, usually used for charging storage batteries.

**chemical stripping** Soaking an optical fiber in a chemical to remove its coating.

**Chemical Vapor Deposition** CVD. In optical fiber manufacturing, a process in which deposits are produced by heterogeneous gas-solid and gas-liquid chemical reactions at the surface of a substrate. The CVD method is often used in fabricating optical fiber preforms by causing gaseous materials to react and deposit glass oxides. The preform may be processed further in preparation for pulling into an optical fiber.

**cherophobia** If you are afraid that you might die laughing you are suffering from cherophobia.

**cherry picker** An industrial crane arranged with a one or two person "bucket" to raise workers to levels that cannot easily be reached by other means. These are used to access fruit trees, windows, utility poles, and other high places. See lineman.

**cherry picking** A call center term. Calls come in and are identified in some way - by ANI (automatic number identification), Caller ID, or caller touchtone input. The identity of the callers is known to the agents in the call center, who can now answer the callers they wish. They decide to answer those callers who they think will buy the most and presumably give them the highest commission or best reward. Thus the expression "cherry picking."

**Chernobyl packet** A network packet that induces a broadcast storm and/or network meltdown. Named after the April, 1986 nuclear accident at Chernobyl in Ukraine.

**Cheyenne Mountain** The U.S. military has built an underground base inside Cheyenne Mountain, Colorado. The base is built on giant springs and is designed to withstand a Soviet ICBM attack. For 40 years it has been the home of Norad, the North American Aerospace Defense Command - the U.S.-Canadian early warning system that scanned the globe looking for the telltale launch of an intercontinental missile. The base is a relic of the cold war, now being revived as the possible headquarters of the United States Space Force.

**CHI** Concentration Highway Interface, pronounced "Ki." A user-programmable, full-duplex interface in the form of a TDM (Time Division Multiplexed) bus. CHI was developed by Lucent, and is used in ISDN controllers.

**Chicago** Chicago's name comes from an American Indian word meaning "place that smells bad."

**chicken** A chicken will lay bigger and stronger eggs if the lighting is managed in such a way as to make it appear that a day is 28 hours long.

**chicken feet** Chicken feet are an extremely popular dim sum dish in Asia. Not surprisingly, they aren't popular with Americans. Simply prepared, chicken feet are cooked in a black-bean sauce. The proper way to eat them is to put the entire foot in one's mouth, suck off the meat, and spit out the bones.

**chicken soup** During the Middle Ages, chicken soup was believed to be an aphrodisiac.

**chiclet** 1. Another term for a B Connector. See B Connector.

2. IBM once came out with a PC that had small keys. The press said the PC had a chiclet keyboard, after the chewing gum.

**Chief Information Officer** CIO. The person responsible for planning, choosing, buying, installing - and ultimately taking the blame for - a company's computer and information processing operation. Originally, CIOs were called data processing managers.



**mule tape • multi-leaving**

which performs both functions and generally operates between two of the AT&T digital hierarchy rates (i.e., DS1 to DS3).

**mule tape** Mule tape is very strong, flat tape which is used to pull cable through underground conduit. Here's how it typically works: First, you use a bore to make an underground hole. Then you fill that hole with hollow concrete cement pipes joined together to form one long underground conduit (i.e. tunnel). Then you go to one end of the tunnel and use an air compressed device to blow a very lightweight "birdie" attached to a lightweight string through the tunnel. Someone at the other end catches the birdie and pulls gently on the string. Attached to the end of the string is strong mule tape. He keeps pulling on it. Attached to the end of the mule tape is the telecommunications cable - fiber or wire - that you really want to install in the underground conduit. The whole point of this elaborate procedure is that it's far better for the cable to lay it after the pipes are laid than it is during the installation process when the cable could be damaged.

**mull** A verb meaning to think it over. When faced with a BIG decision, my partner, Gerry Friesen, often says he'd like "to mull it over." Often he takes a day or two. It's a good strategy since it also gives you the time to do a little more due diligence, also call research.

**multi-access** The ability of several users to communicate with a computer at the same time with each working independently on their own job.

**multi-address calling facility** A system service feature that permits a user to nominate more than one addressee for the same data. The network may accomplish this sequentially or simultaneously.

**multi-alternating routing** Alternate routing with provision for advancing a call to more than one alternate route, each of which is tested in sequence in the process of seeking an idle path.

**multi-carrier modulation** MCM. A technique of transmitting data by dividing the data into several interleaved bit streams and using these to modulate several carriers. MCM is a form of frequency division multiplexing.

**multi-cast** Also spelled multicast. The broadcast of messages to a selected group of workstations on a LAN, WAN or the Internet. Multicast is communication between a single device and multiple members of a device group. For example, an IPv6 router might address a series of packets associated with a routing table update to a number of other routers in a LAN internetwork. Similarly, a LAN-attached workstation might address a transmission to a number of other LAN-attached devices. Companies are discovering they can distribute material to large numbers of employees and others on their intranets more efficiently using multicast than they can by sending such material in separate bursts to each user. In multicast mode, routers distribute a given file to all hosts that have signaled they want to receive the material, using the Class D addresses of the IP addressing hierarchy. See also Multicast and Multi-Cast Packets and IPv6. Contrast with Unicast, Anycast and Broadcast.

**multi-cast packets** Multicast packets are addressed to multiple devices within a group of devices. For example, LAN stations use multi-cast packets to deliver information to a specific set of devices such as routers, file servers, and hosts. See Multi-Cast.

**multi-cast user message** A user message generated at the source node and distributed to two or more destination nodes.

**multi-casting** The ability of one network node to send identical data to a number of end points - known as broadcast in other circles; one example is if new software or addressing updates need to be distributed to all users; also, a point-to-multipoint video transmission is a multi-cast operation.

**multi-channel** The use of a common channel to make two or more channels either by splitting the frequency band of the common channel into several narrower bands (called frequency division multiplexing) or by allocating time slots in the entire channel (time division multiplexing).

**multi-channel aggregation** A feature under some versions of Windows which gives remote users the option of using two phone lines for the same remote session. This way you double bandwidth, thus making their session go twice as fast. I've never used this feature and I'm doubtful that it works as advertised.

**Multi-Channel Microwave Distribution Service** MMDS. An FCC name for a service (operating in the frequency range 2150-2162 MHz and 2500-2686 MHz) where multiple NTSC video channels are broadcast within a limited geographic area (typically 25 mile radius from single omnidirectional antenna). Also called multi-channel multipoint distribution service or "wireless cable" service.

**Multi-Channel Multipoint Distribution Service** MMDS. An FCC name for a service (operating in the frequency range 2150-2162 MHz and 2500-2686 MHz) where multiple NTSC video channels are broadcast within a limited geographic area (typically 25 mile radius from single omnidirectional antenna). Also called "wireless cable" service. MMDS was a commercial failure due to limited bandwidth, performance issues and

Line-of-Sight requirements. MMDS has been superseded by the IEEE 802.16a specification. See also 802.16 and 802.16a.

**multi-channel transmitter** A transmitter using low level combining techniques to process many channels at the same time.

**multi-conductor** More than one conductor within a single cable complex.

**multi-domain network** In IBM Systems Network Architecture technology, a network that contains more than one host-based System Services Control Point (SSCP).

**multi-drop line** A multi-drop private line or data line is a communications path between two or more locations requiring two or more LECs, but there are multiple 'drops' per LEC. For example, a hospital in Detroit has a data line going to NY, NY. But in New York, NY there are four hospitals in a several block area. Therefore, one data line with four drops. Then you can have a multipoint - multidrop line, which is a combination of both.

**multi-drop line** A communications channel that services many data terminals at different geographical locations and in which a computer (node) controls utilization of the channel by polling one distant terminal after another and asking it, in effect, "Do you have anything for me?"

**multi-entire buildings** In large metropolitan areas, it is common to find one local telephone exchange building housing more than one local switch, and for each switch to handle five or more exchanges.

**multi-fiber** A fiber that supports propagation of more than one of a given wavelength. See Multi-Mode.

**multi-frame** In PCM systems, a set of consecutive frames in which the position of each frame can be identified by reference to a multi-frame alignment signal. The multi-frame alignment signal does not necessarily occur, in whole or in part, in each multi-frame.

**multi-frequency monitors** Also known as multisync or multiscan monitors. They can show images in several resolution standards. Such versatility makes them more expensive than single-resolution monitors (e.g. a standard VGA) but also less prone to instant obsolescence. A multisync monitor showing a VGA may or may not look better than a VGA monitor showing a VGA image. That depends on the screen's other attributes.

**multi-frequency pulsing** An in-band address signaling method in which ten decimal digits (the numbers on the touchtone pad) and five auxiliary signals are each represented by selecting two frequencies and combining them into one "musical" sound. The frequencies are selected from six separate frequencies - 700, 900, 1100, 1300, 1500 and 1700 Hz. See also Captain Crunch.

**multi-frequency signaling** MF. A signaling code (utilizing pairs of frequencies in the 700-1700 Hz range) for communications between network switches. Code includes 10 digits and special auxiliary signals.

**multi-function card** A PC card that incorporates multiple peripherals such as a network adapter and modem.

**multi-function peripherals** MFP. These are devices which take on two or more functions generally associated with individual peripherals and combine these into one product or in a linker series of modules. A multi-function peripheral might combine a fax machine with a photocopier with a computer printer with a scanner. The term is not very precise, but it tends increasingly to mean a computer device that will print, photocopy, fax and/or scan.

**multi-haul** A network that is not designed solely for traditional access traffic, or for metro traffic, or for regional traffic, or for long-haul traffic, but instead is designed to carry all of those types of traffic.

**multi-homed computer** A computer that has multiple network adapters or that has been configured with multiple IP addresses for a single network adapter.

**multi-homed** Multihomed means connected to multiple networks simultaneously for redundancy and to handle load. All major telecommunications carriers are multihomed with connections to several other carriers at all major interconnection points on their networks. A multi-homed host is a computer connected to more than one physical datalink. The data links may or may not be attached to the same network.

**multi-hop** An example of a single hop system is a microwave system between one building (let's say downtown San Francisco) and another across town (let's say uptown San Francisco). Each with one microwave antenna on its roof. Let's say we wanted to extend that system to Oakland. We'd put a second antenna on the uptown San Francisco building and shoot across to an antenna in Oakland. That building would now have a multi-hop transmission system.

**multi-hosting** The ability of a Web server to support more than one Internet address and more than one home page on a single server. Also called Multi-Homing.

**multi-leaving** In communications, the transmission (usually via bisync facilities and